

000367201 030502

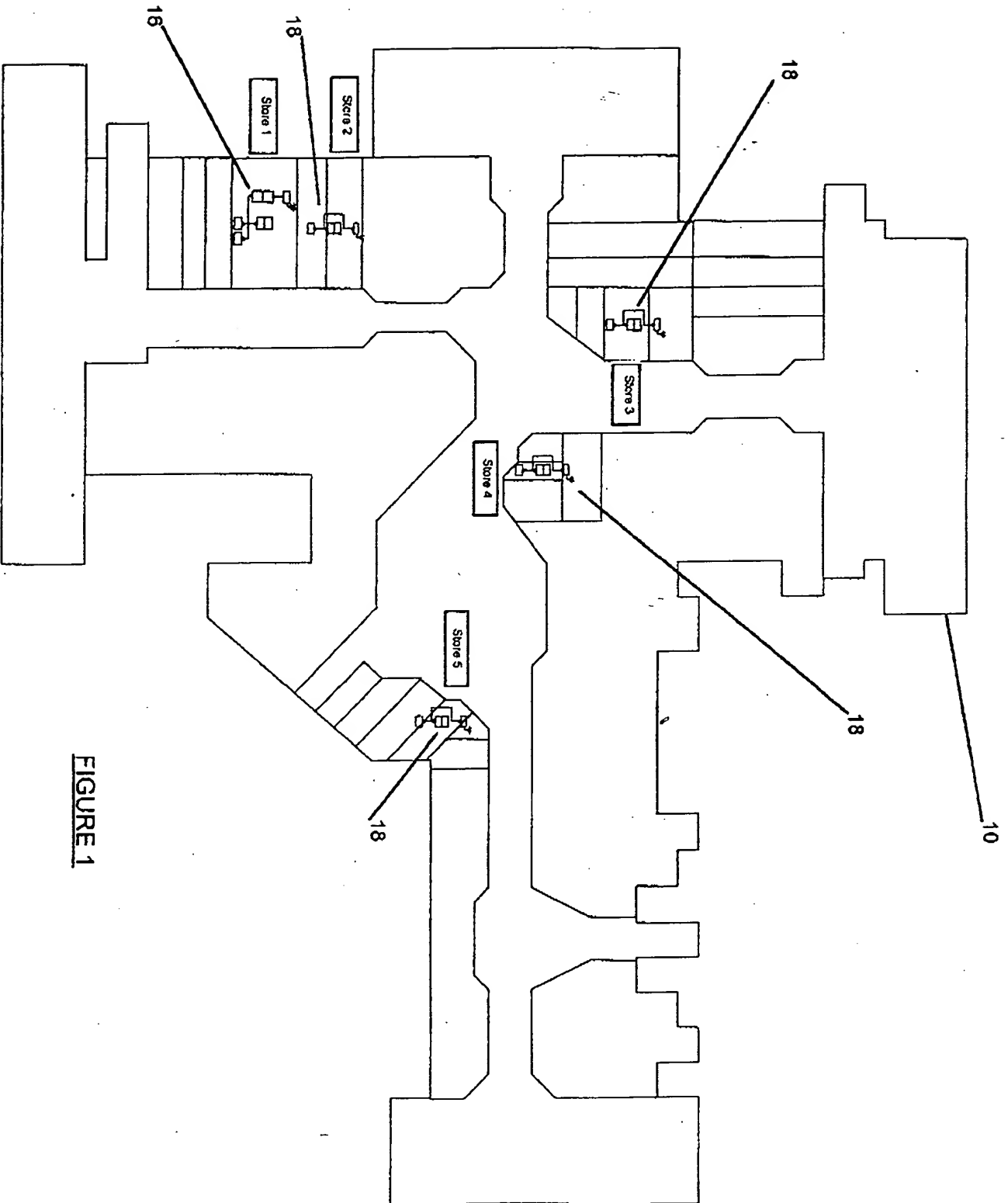


FIGURE 1

The diagram illustrates a multi-channel communication system 17. At the top, a 'COMMUNICATION MEDIA' block 48 is connected to a 'CPU' block 20. The CPU 20 is connected to a 'VTS MODULE(S)' block 30, a 'CONTROLLER' block 22, and a 'MODULE(S)' block 32. The VTS MODULE(S) 30 is connected to the CPU 20 via three channels, each with 'R' and 'A' blocks. The CONTROLLER 22 is connected to the CPU 20 via three channels, each with 'R' and 'A' blocks. The MODULE(S) 32 is connected to the CPU 20 via three channels, each with 'R' and 'A' blocks. The CPU 20 is also connected to a 'PORT COMBINER' block 46 via three channels, each with 'S D' and 'R T S' blocks. The PORT COMBINER 46 is connected to the CPU 20 via three channels, each with 'R D' and 'C T S' blocks. The PORT COMBINER 46 is also connected to a 'UTILITY MONITOR(S)' block 24 via three channels, each with 'S D' and 'R T S' blocks. The UTILITY MONITOR(S) 24 is connected to the PORT COMBINER 46 via three channels, each with 'R D' and 'C T S' blocks. The UTILITY MONITOR(S) 24 is also connected to a 'UTILITY NODE(S)' block 34 via three channels, each with 'A N' blocks. The UTILITY NODE(S) 34 is connected to the UTILITY MONITOR(S) 24 via three channels, each with 'A N' blocks. The UTILITY MONITOR(S) 24 is also connected to the CPU 20 via three channels, each with 'R' and 'A' blocks.

**FIGURE 2B**

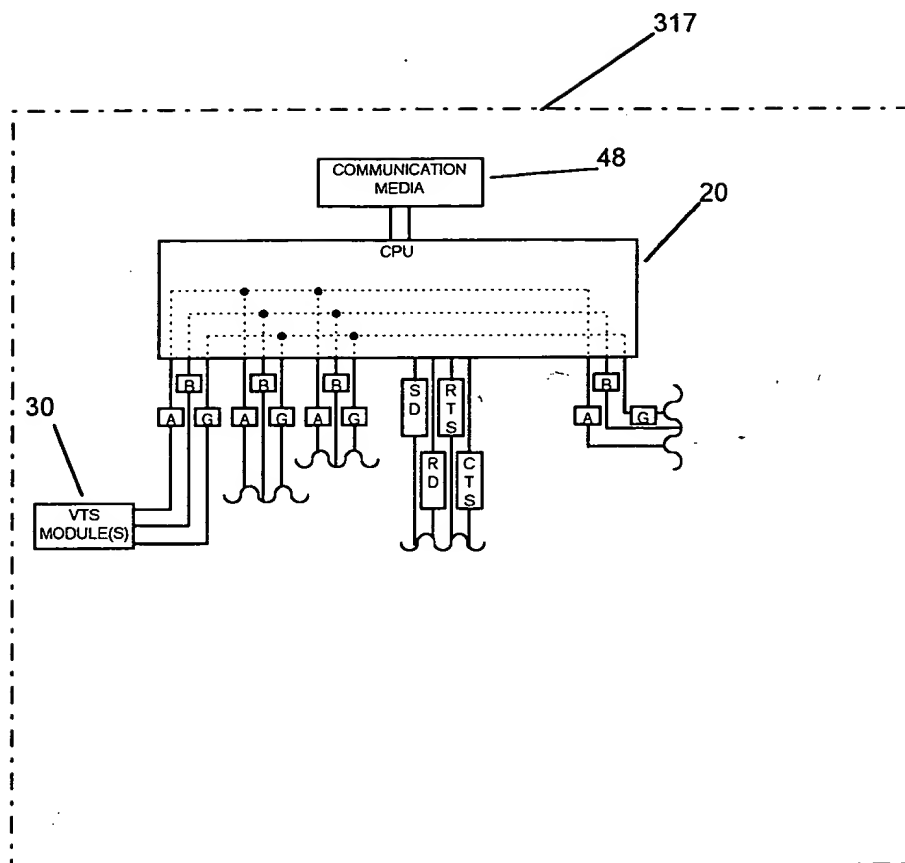


FIGURE 3A

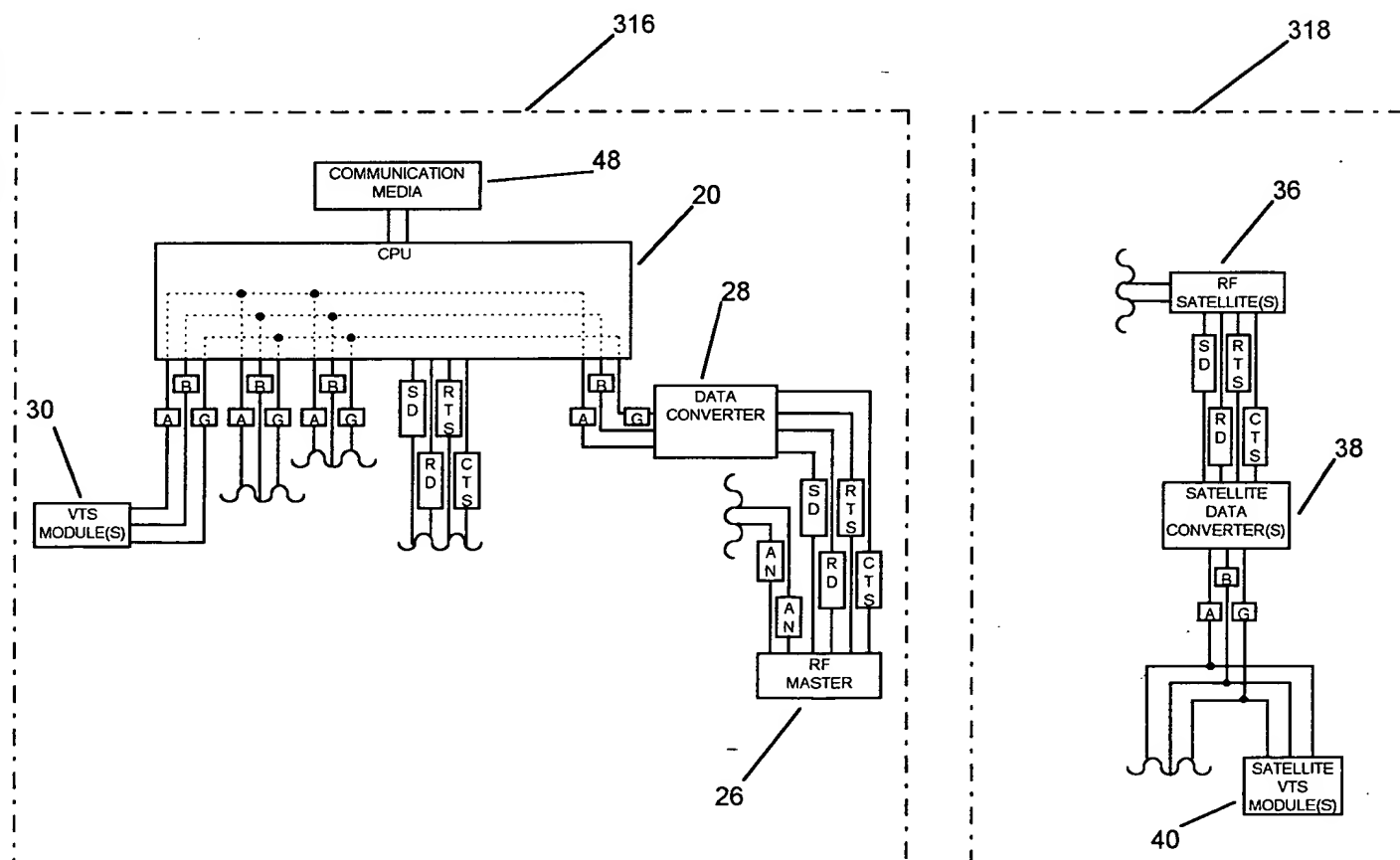


FIGURE 3B

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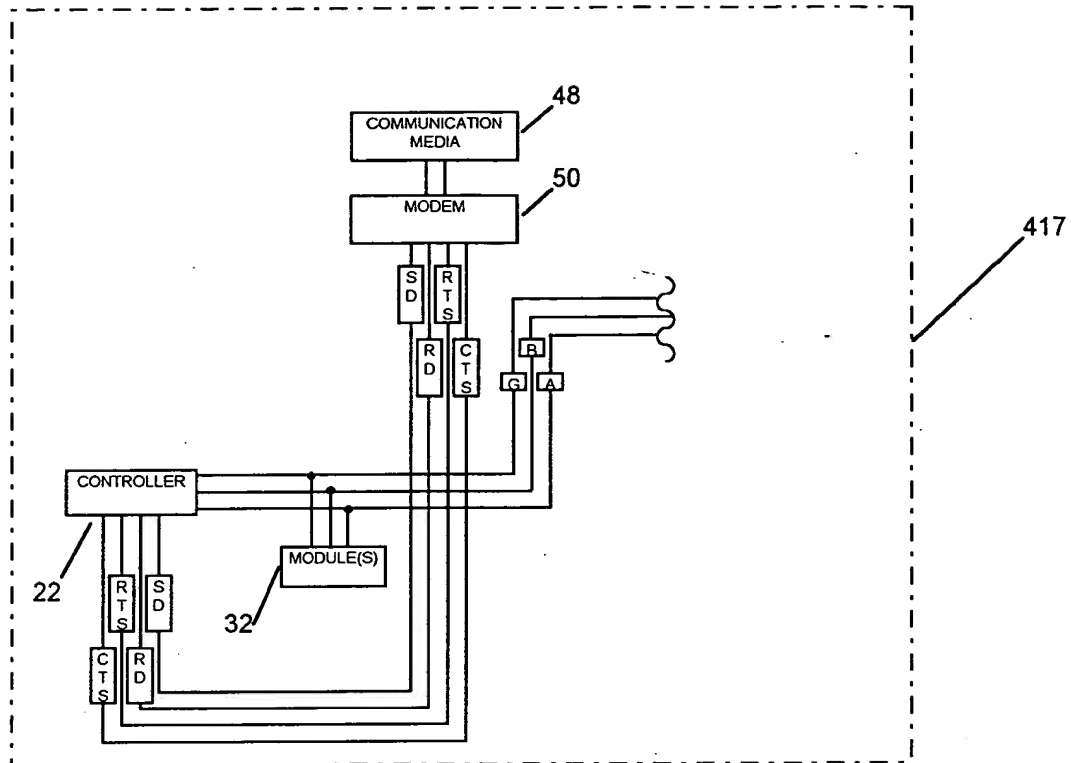


FIGURE 4A

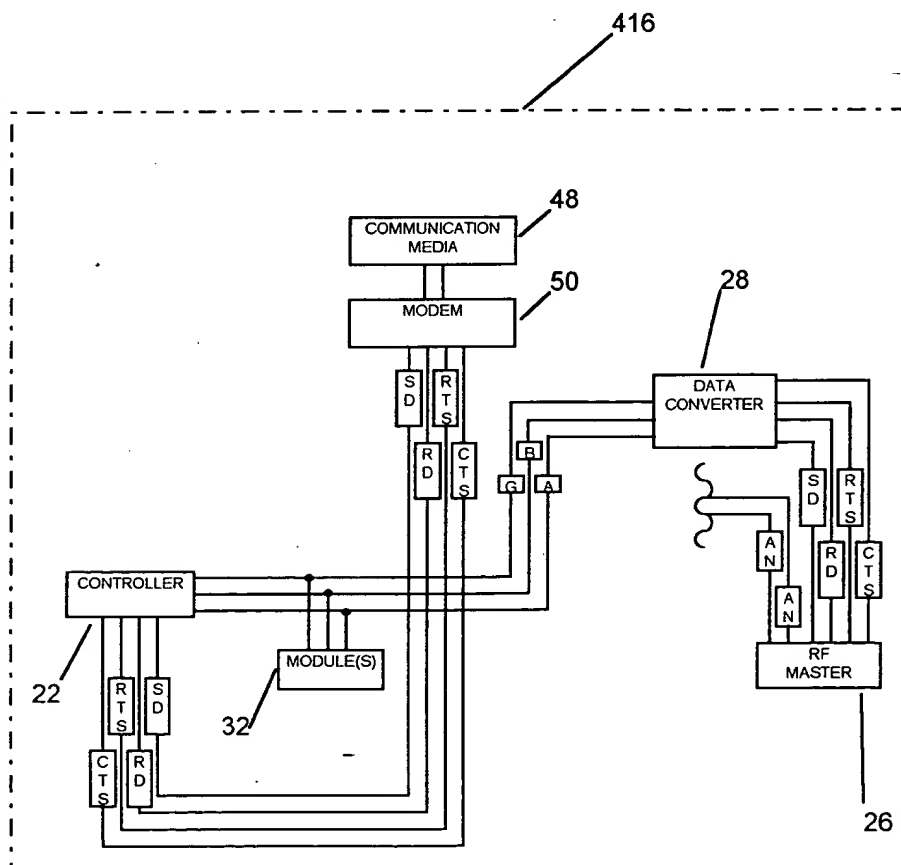
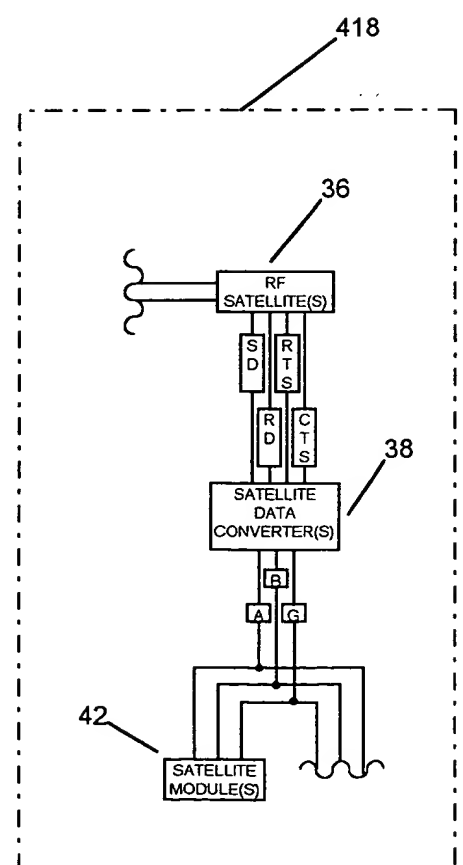


FIGURE 4B



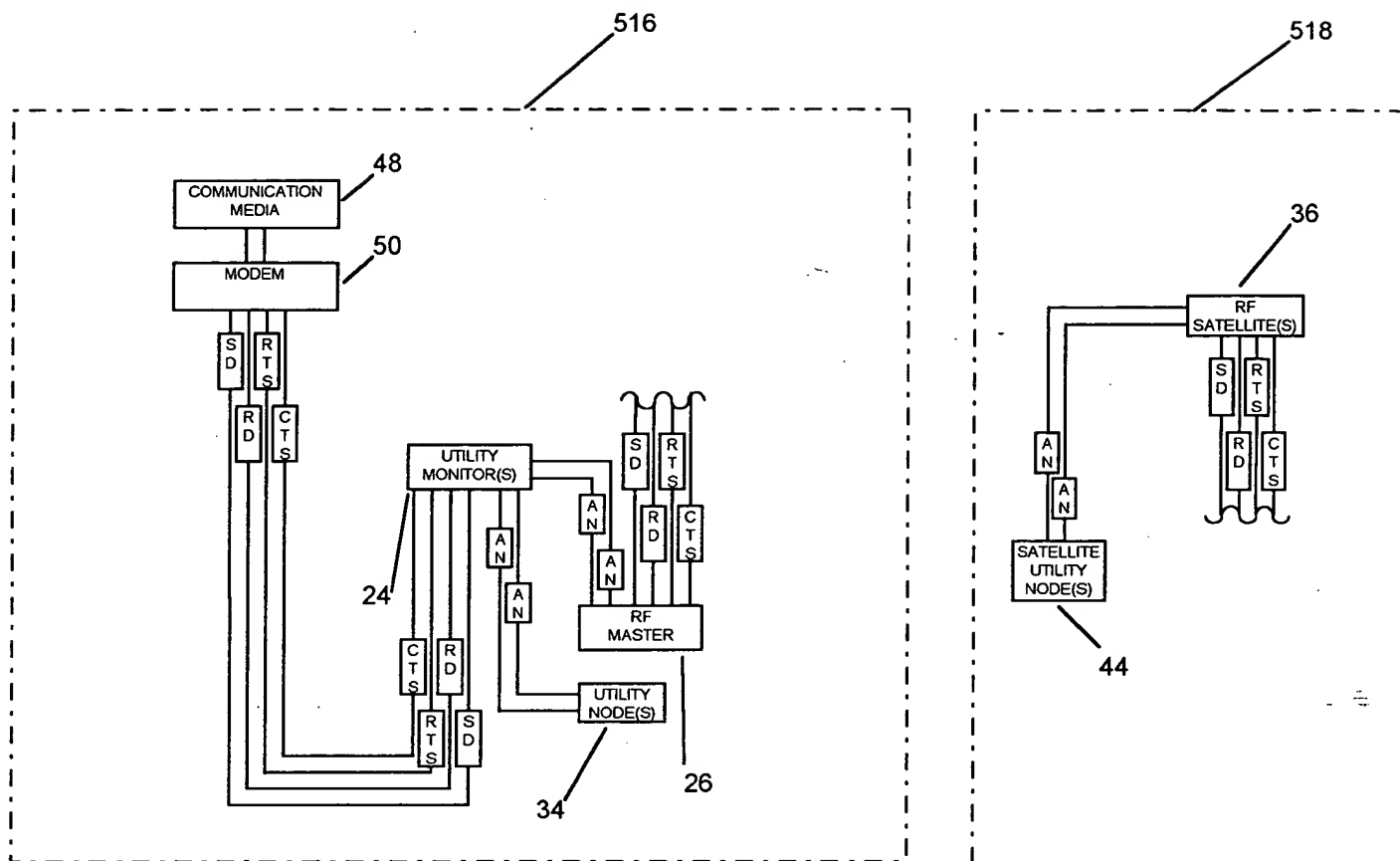


FIGURE 5B

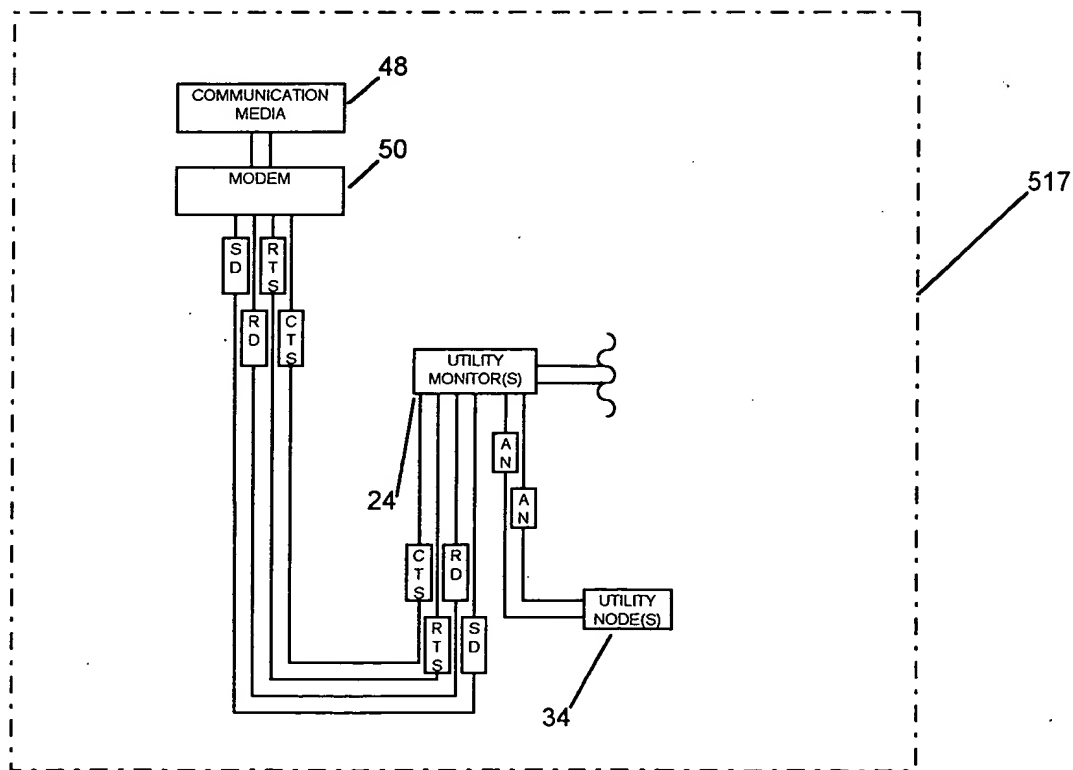


FIGURE 5A



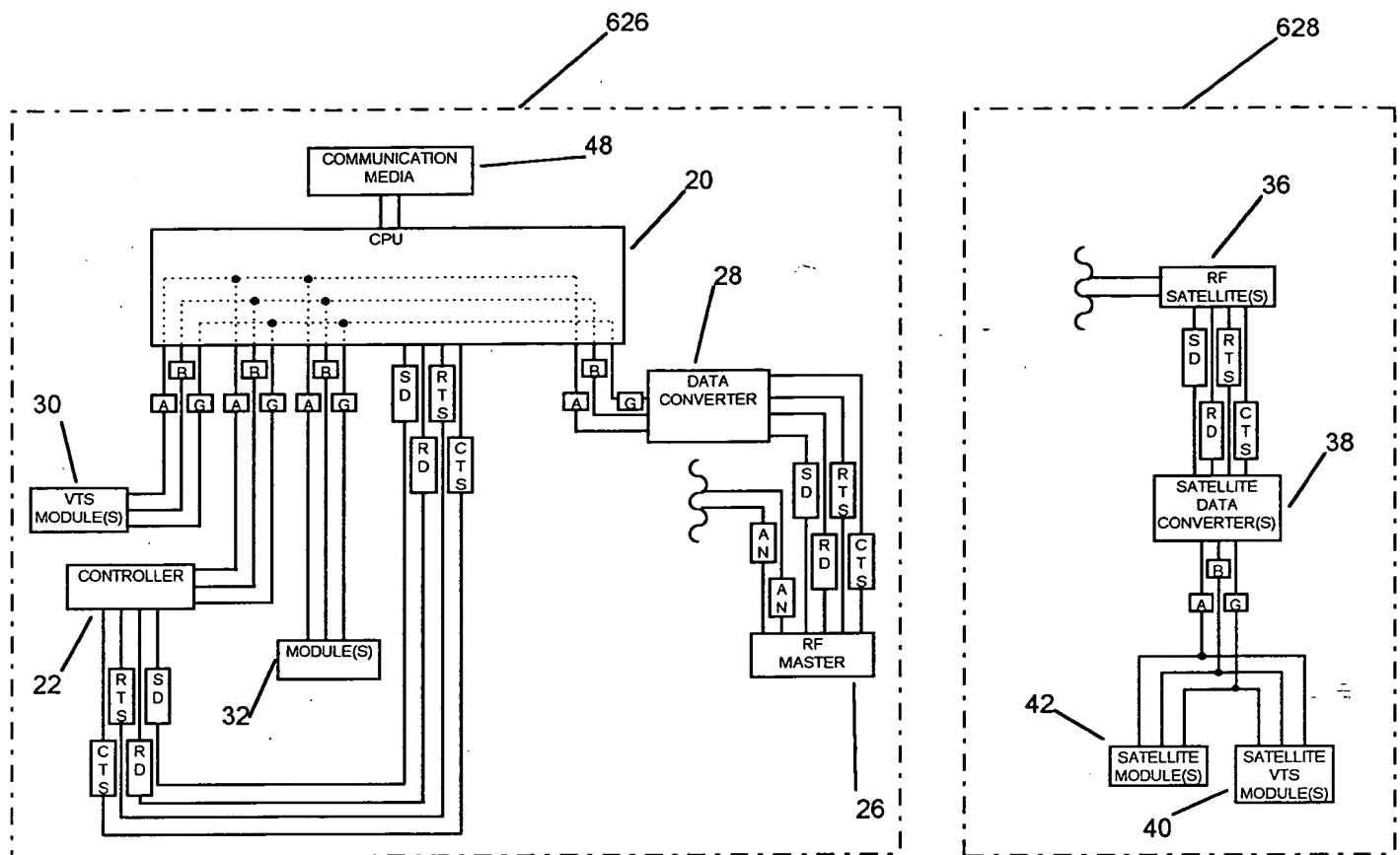


FIGURE 6C

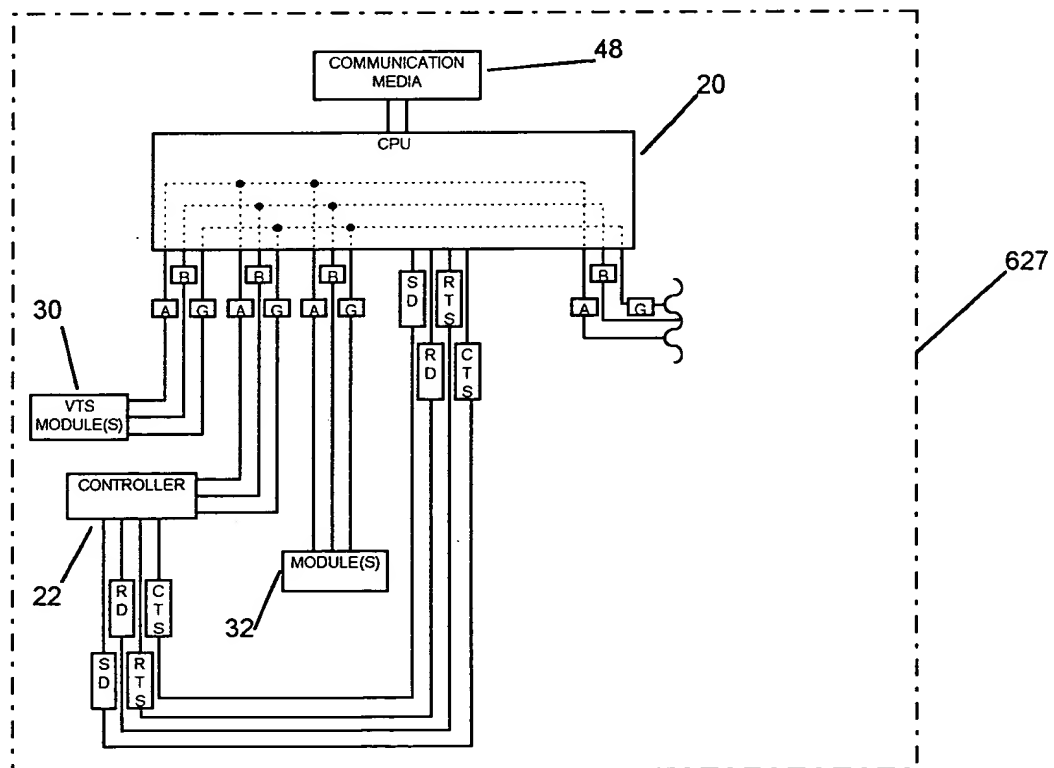


FIGURE 6D

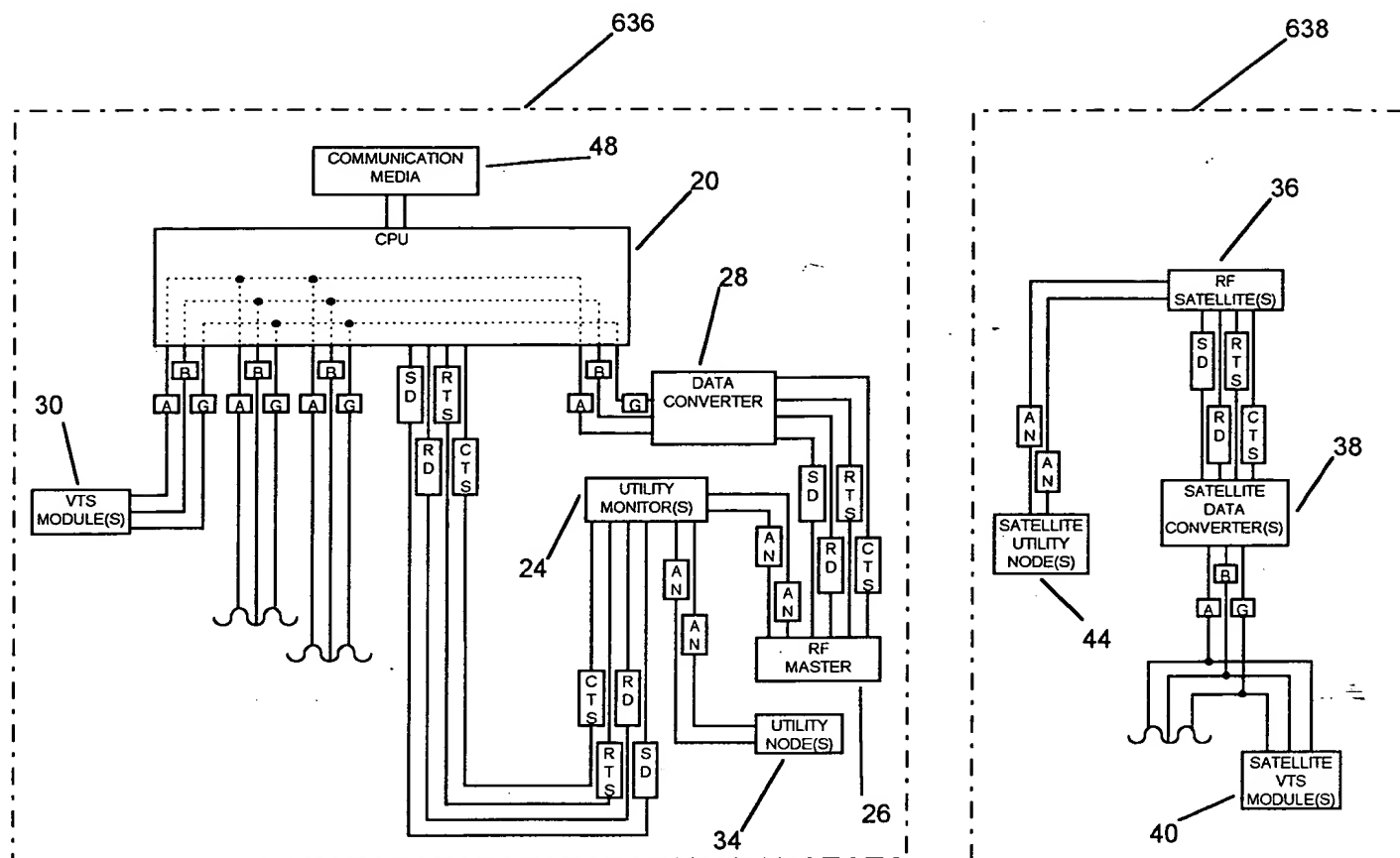


FIGURE 6E

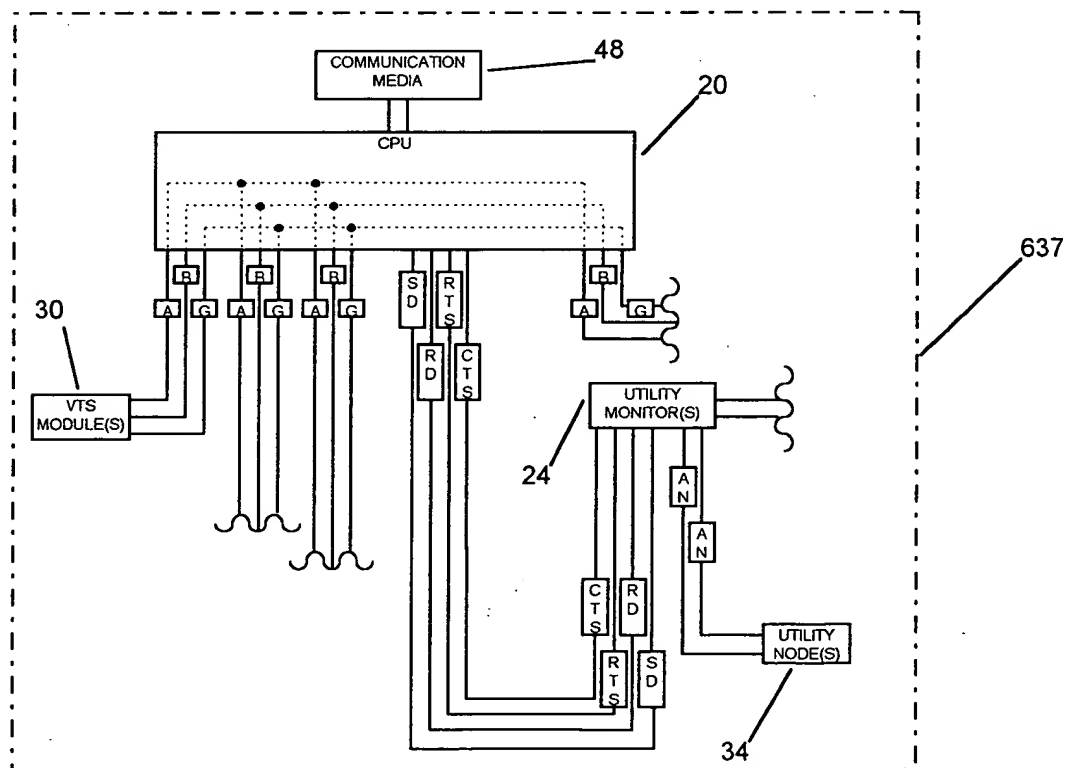


FIGURE 6F



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graph TD
    700([REMOTE COMMUNICATION BEGIN]) --> 702{CD RAISED?}
    702 -- NO --> 704[REMOTE COMMUNICATION STOP]
    702 -- YES --> 706[REMOTE SOFTWARE ACTIVE]
    706 --> 708{MODEM RECEIVING DATA REMOTELY?}
    708 -- YES --> 710[MODEM DROPS CTS LINE]
    710 --> 712{VTS DATA?}
    712 -- YES --> 714[SOFTWARE STORES NUMBER OF VTS BYTES IN CVDR]
    714 --> 716[DATA ROUTED TO RAM FOR VTS SOFTWARE]
    716 --> 718[CVDR SET TO 0]
    718 --> 740{MODEM CTS LINE RAISED?}
    740 -- NO --> 712
    740 -- YES --> 742{PORT COMBINER RTS LINE RAISED?}
    742 -- YES --> 744[VTS MONITORS RTS LINE]
    744 --> 746[VTS MONITORS CTS LINE]
    746 --> 740
    742 -- NO --> 748[VTS SOFTWARE DISABLES PORT COMBINER]
    748 --> 750[DATA SENT TO MODEM BY VTS SOFTWARE]
    750 --> 752[DATA RECEIVED AND TRANSMITTED BY MODEM]
    752 --> 738[CONTROLLER OR UTILITY MONITOR WAITS]
    738 --> 702
    708 -- NO --> 736[MODEM RAISES CTS LINE]
    736 --> 728{PORT COMBINER CTS RAISED?}
    728 -- YES --> 730[RESPONDING DEVICE RAISES RTS LINE]
    730 --> 732[PORT COMBINER DROP CTS TO OTHER SLAVE PORT]
    732 --> 734[DATA RECEIVED AND TRANSMITTED BY MODEM]
    734 --> 738
    728 -- NO --> 720[DATA ROUTED THROUGH PORT COMBINER]
    720 --> 722[DATA TRANSMITTED ON PORT COMBINER SLAVE PORTS]
    722 --> 724[CONTROLLER AND UTILITY MONITOR RECEIVE DATA]
    724 --> 726[CONTROLLER OR UTILITY MONITOR CHECK CTS LINE]
    726 --> 728

```

FIGURE 7

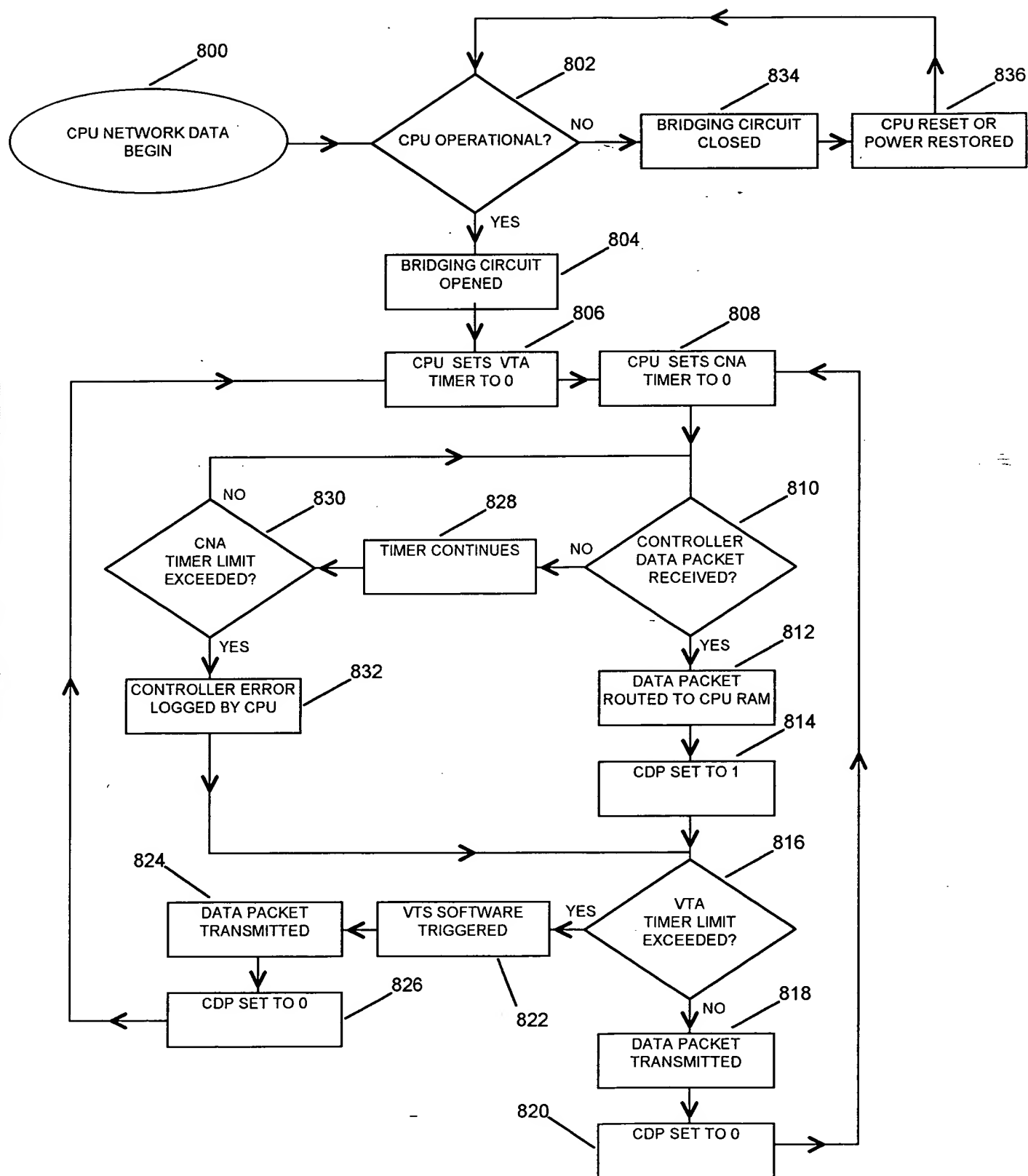


FIGURE 8

RF NETWORK PROTOCOL

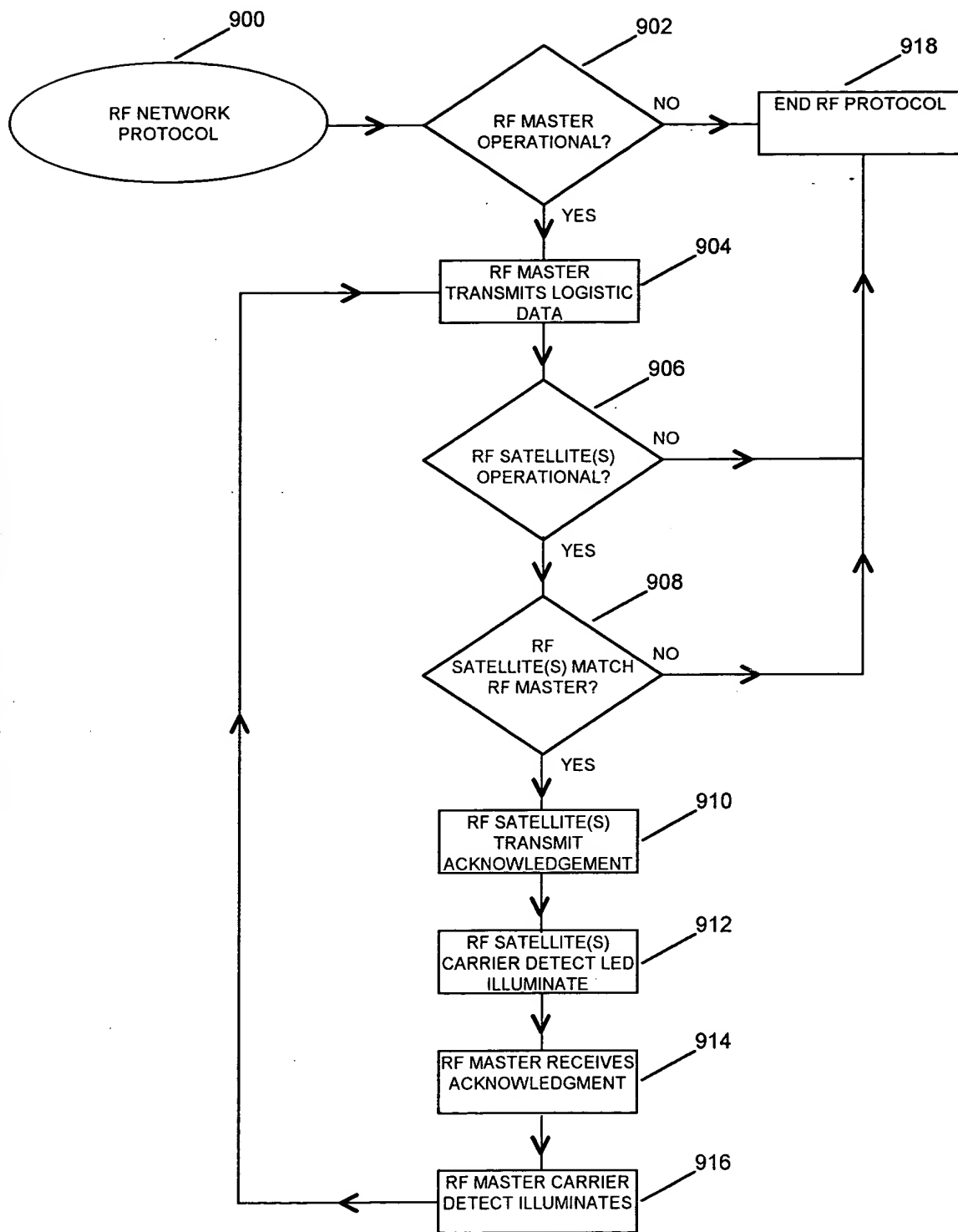


FIGURE 9

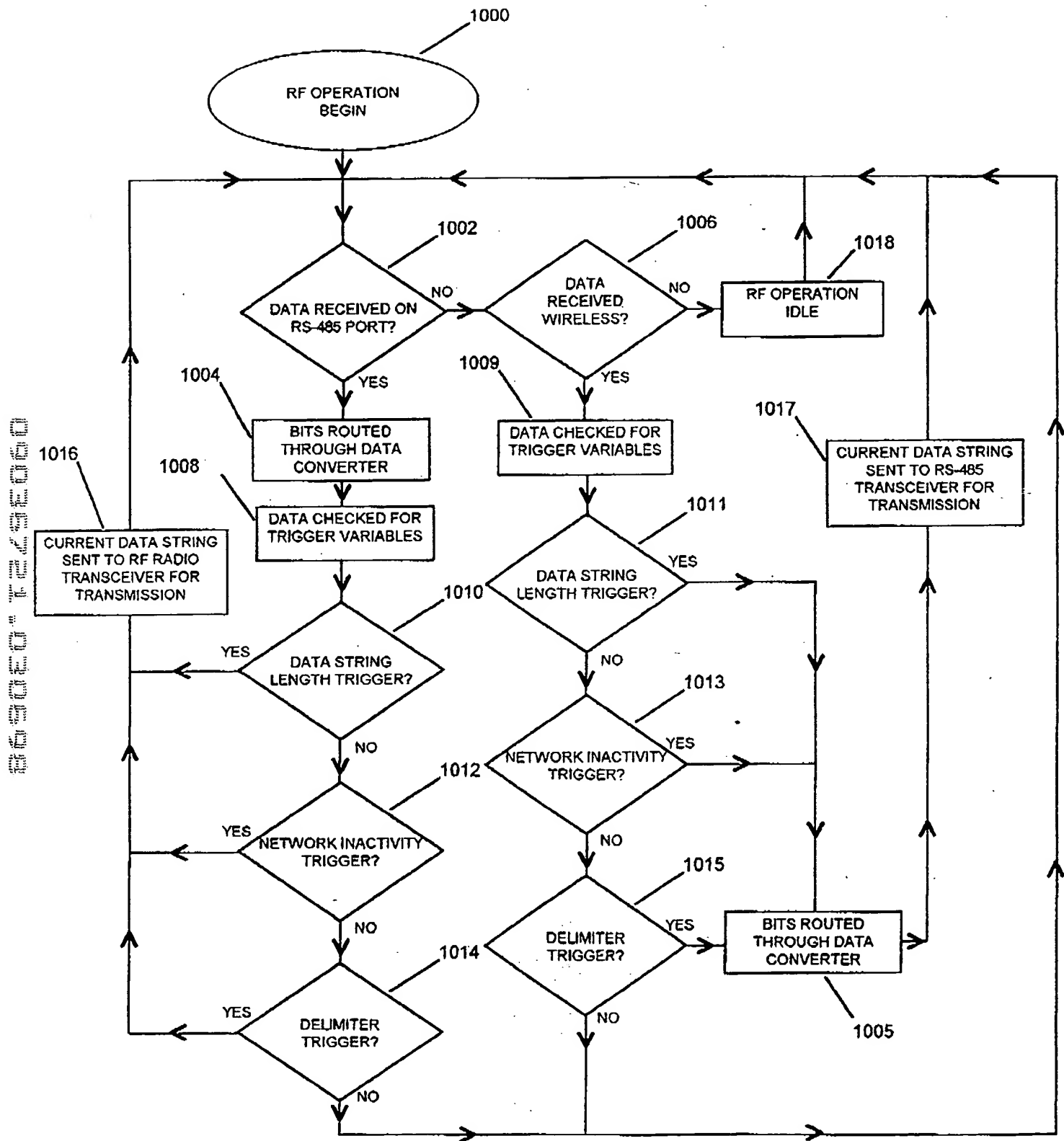


FIGURE 10

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graph TD
    1100([RF SATELLITE UTILITY DATA BEGIN]) --> 1102[RF SATELLITE PROCESSOR SCANS ADC]
    1102 --> 1104[RF SATELLITE PROCESSOR RETRIEVES CURRENT ADC DATA]
    1104 --> 1106[ADC DATA SENT TO UDB(S) RAM LOCATION]
    1106 --> 1108[EXISTING UDB(S) RELOCATED TO LUBD(S) RAM LOCATION]
    1108 --> 1110[RF SATELLITE PROCESSOR COMPARES UDB(S) AND LUBD(S) VALUE]
    1110 --> 1112{CHANGE OF VALUE(S)?}
    1112 -- YES --> 1114[COS(S) CHANGED TO VALUE OF 1]
    1114 --> 1116[UBD(S) WITH COS(S) = 1 ROUTED TO NEW RAM LOCATION]
    1116 --> 1118[UBD(S) WITH COS(S) = 1 IDENTIFIED AS NUDB(S)]
    1118 --> 1120[RF SATELLITE PROCESSOR COUNTS NUDB(S) AVAILABLE]
    1120 --> 1122[NUDB COUNT BYTE GENERATED]
    1122 --> 1124[RF SATELLITE PROCESSOR INITIATES ROM TABLE CONVERSION]
    1124 --> 1126[NUDB COUNT BYTE ADDED TO CURRENT DATA STRING]
    1126 --> 1128[CONVERTED NUDB(S) ADDED TO CURRENT DATA STRING]
    1128 --> 1130[CURRENT DATA STRING SENT TO RF RADIO TRANSCEIVER FOR TRANSMISSION]
    1130 --> 1102

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FIGURE 11

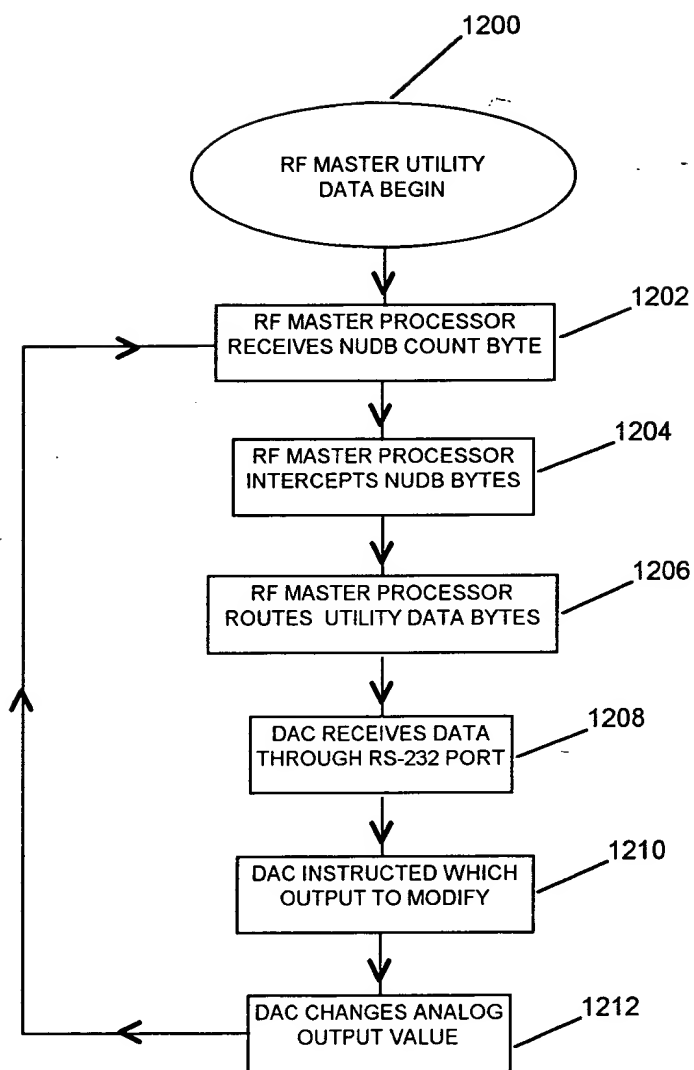


FIGURE 12

1300 1302 1304 1306 1308 1310 1312 1314 1316 1318 1320 1322 1324 1326

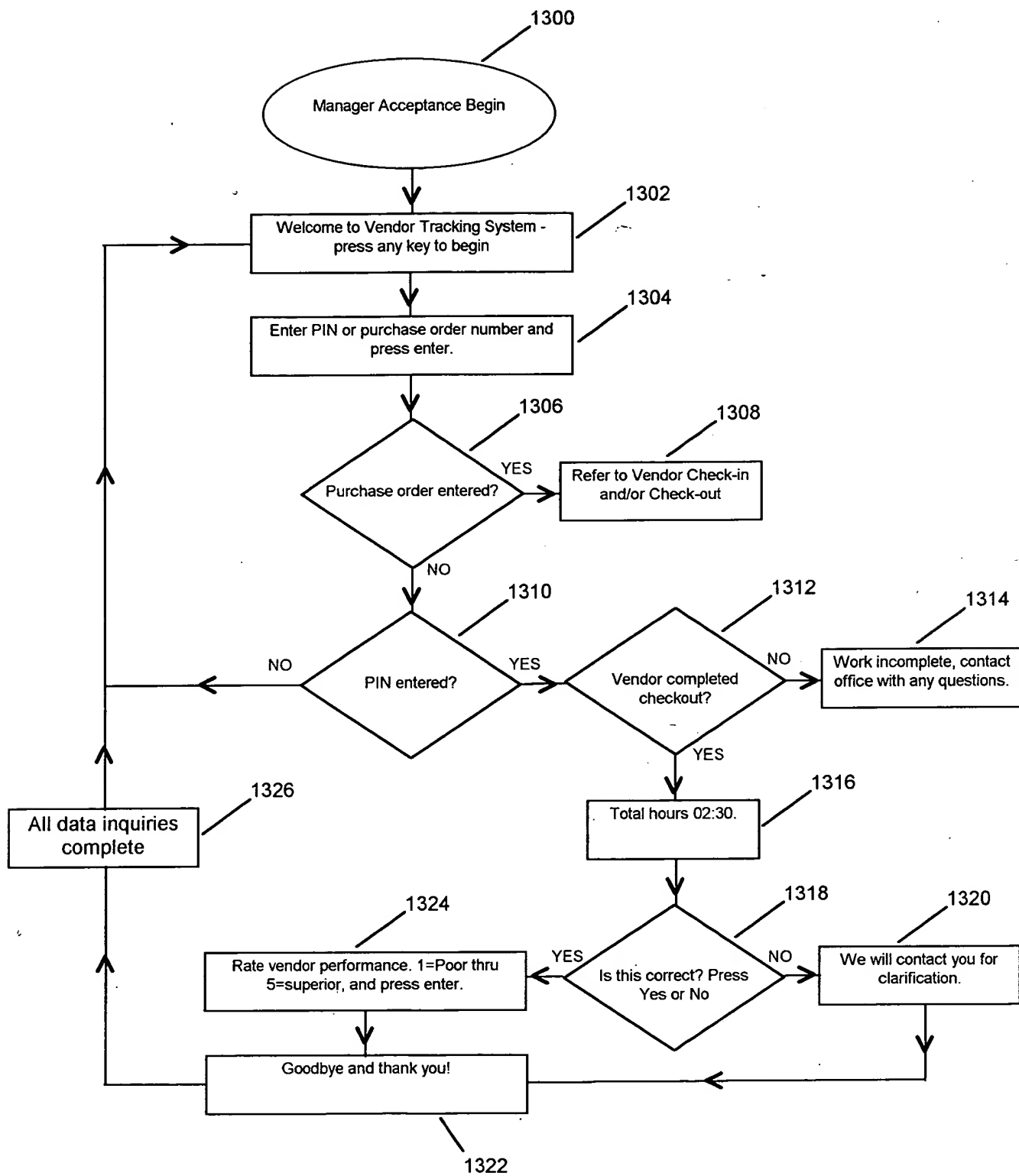


FIGURE 13

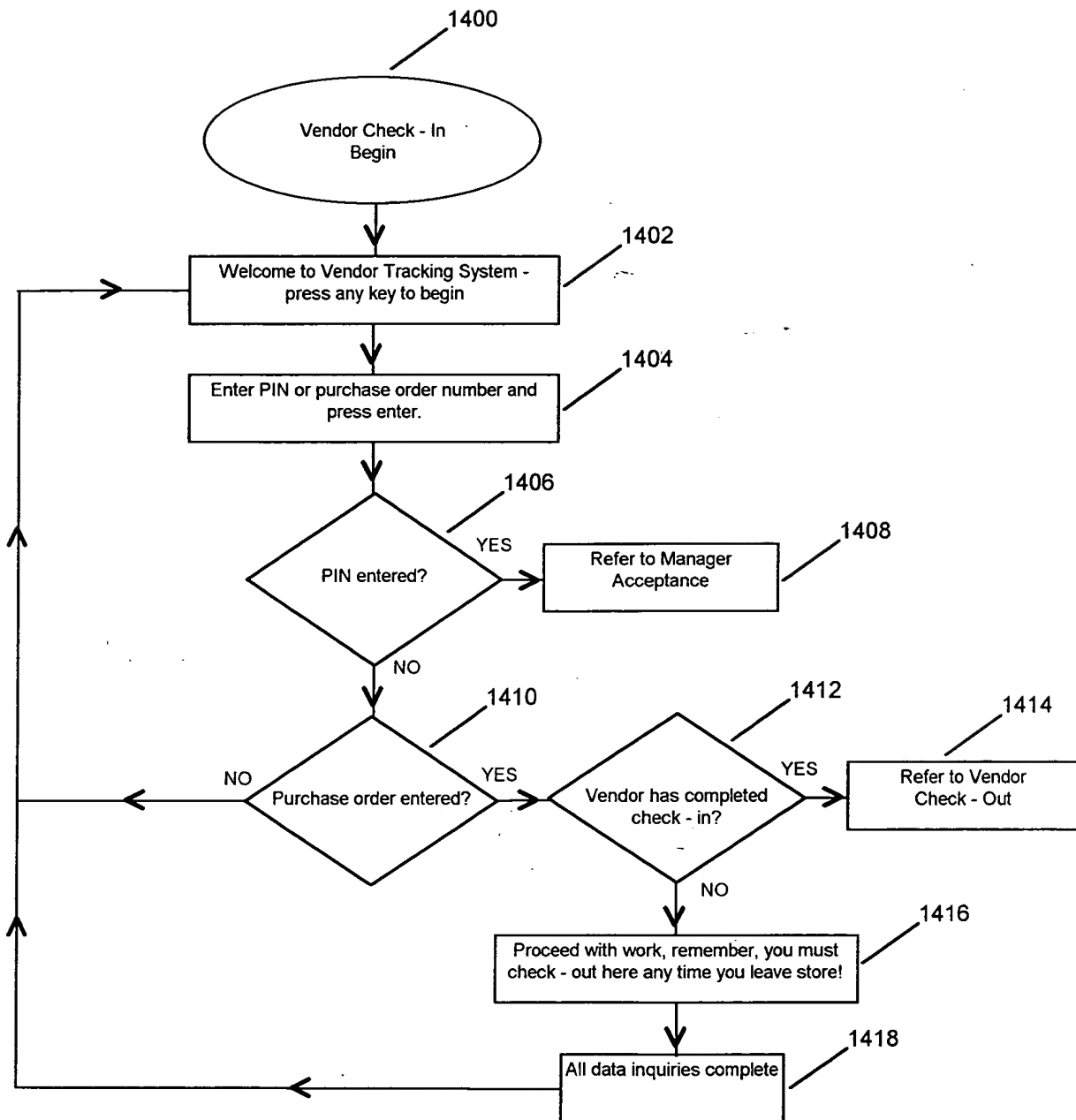


FIGURE 14



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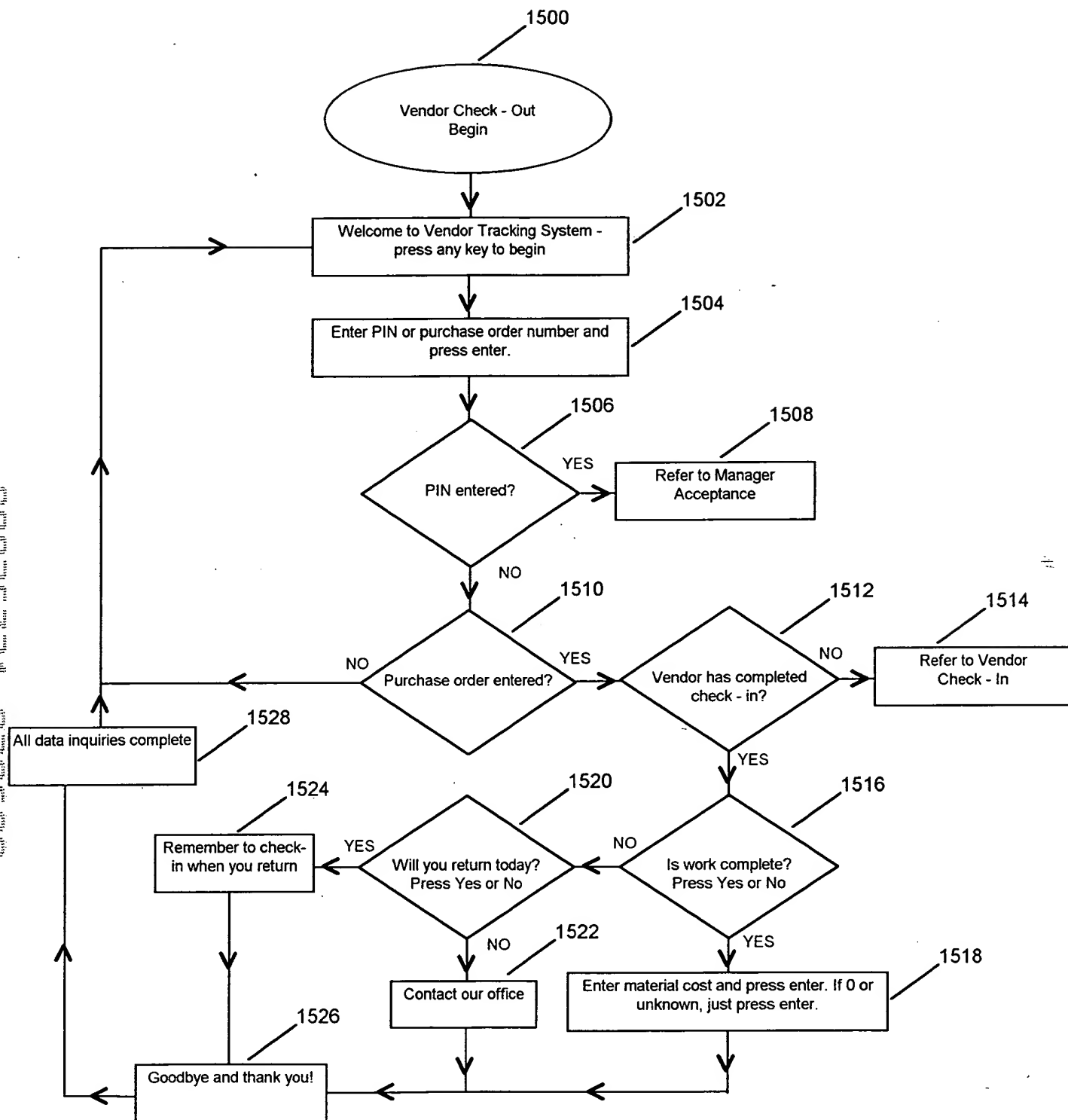


FIGURE 15

363000 T 23060

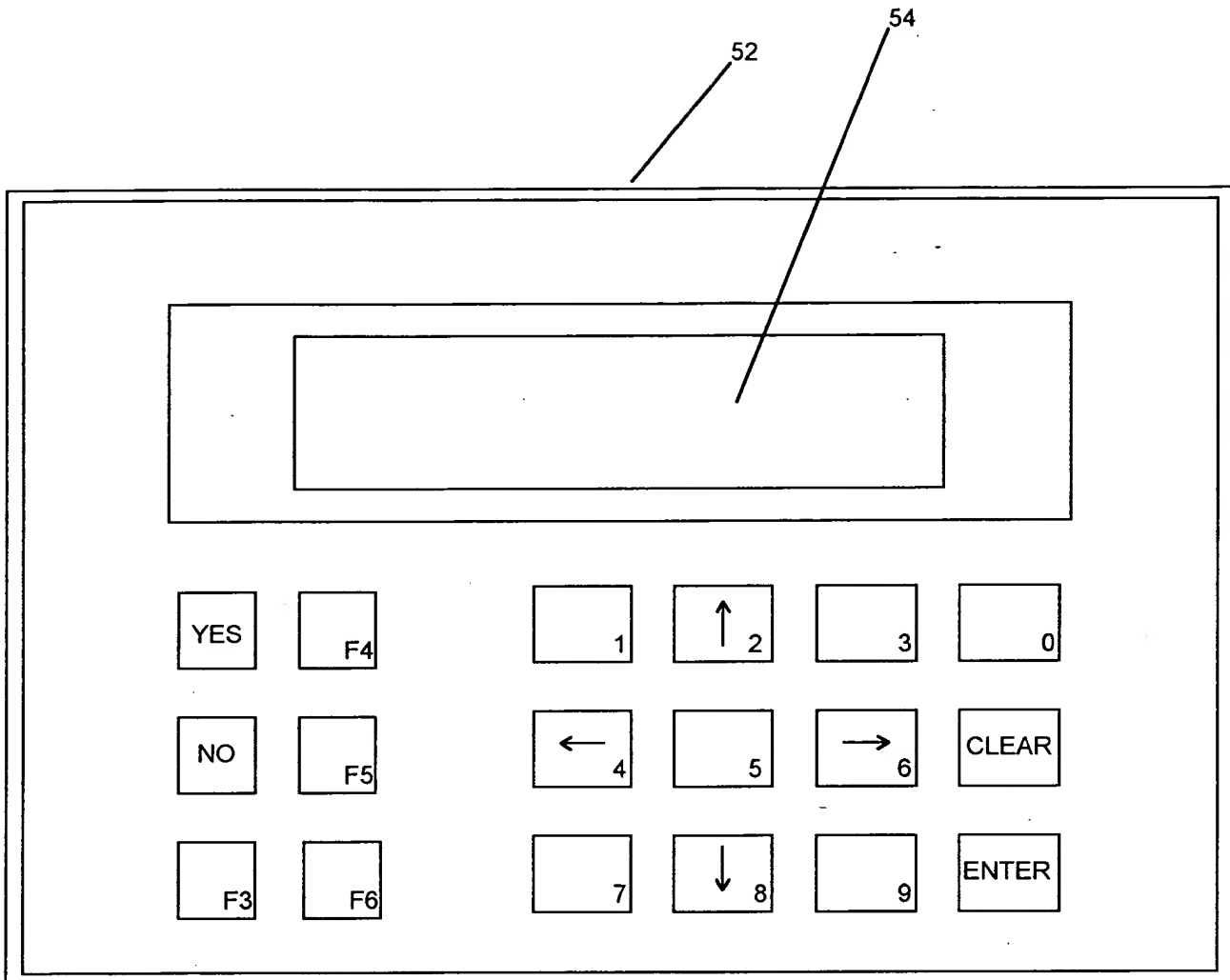


FIGURE 16

FIG. 17

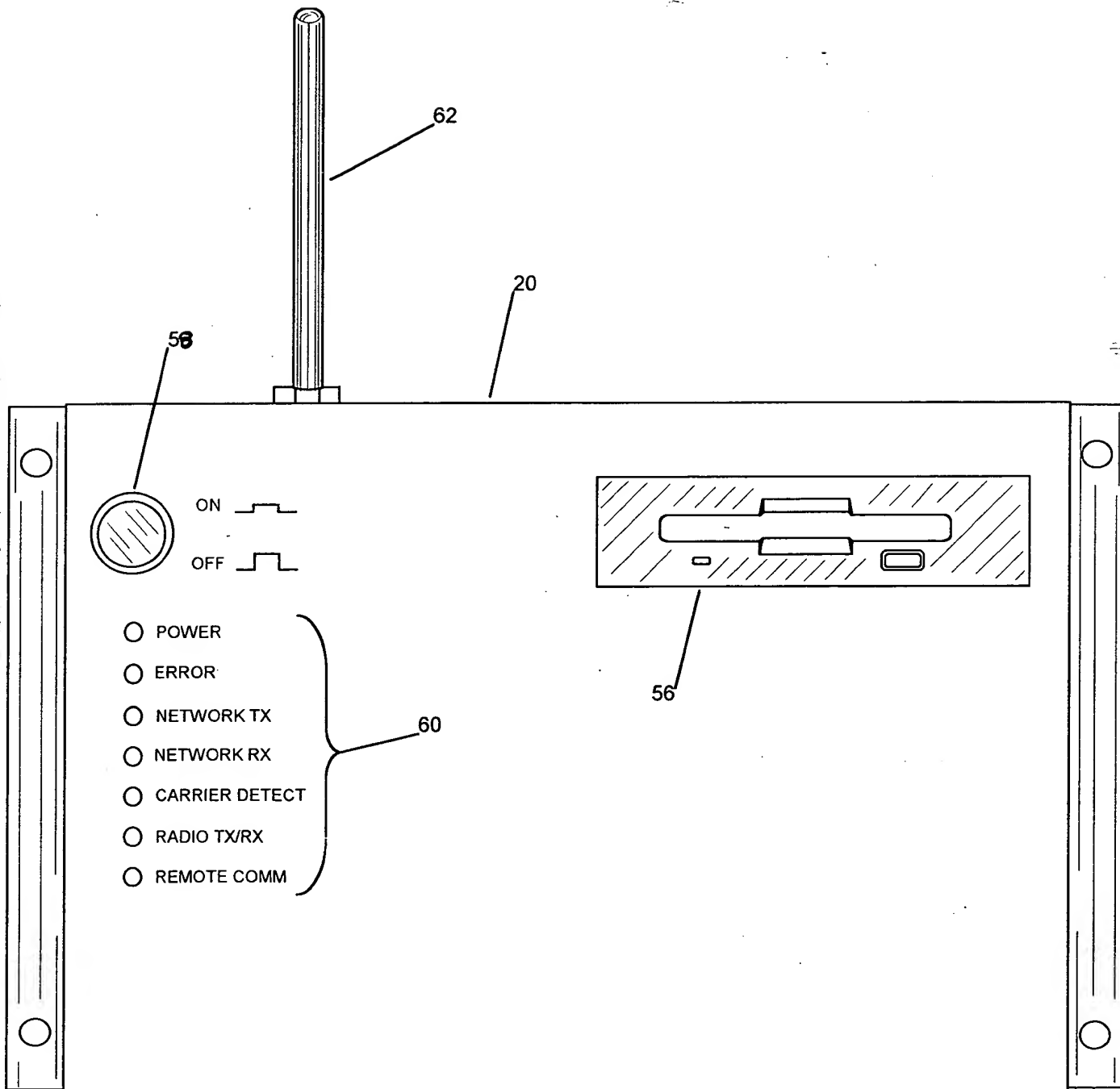


FIGURE 17

363020 T 2 3 0 50

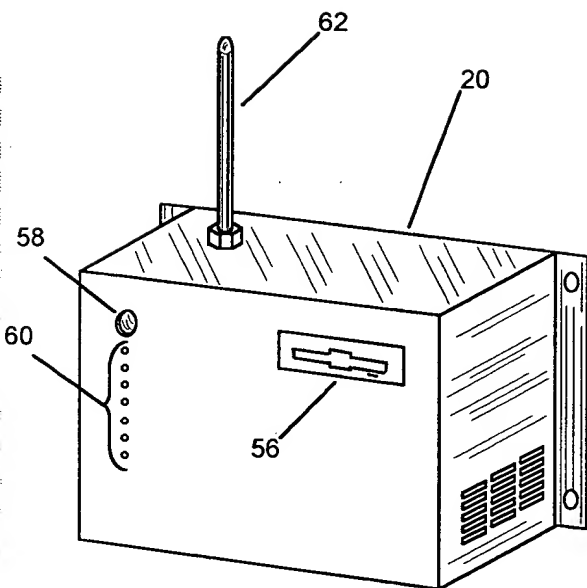


FIGURE 18B

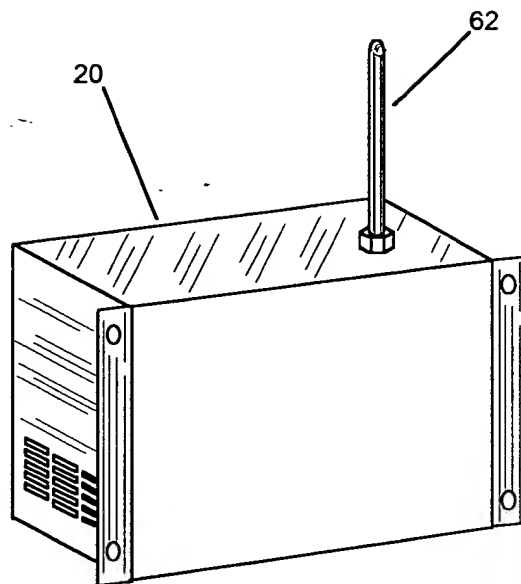


FIGURE 18A

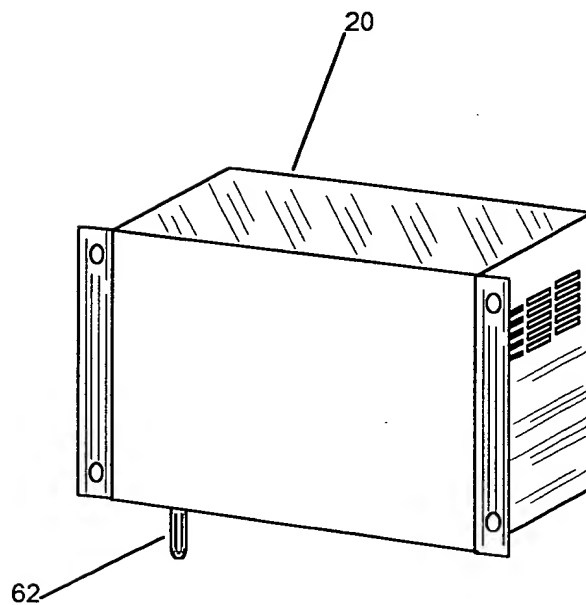


FIGURE 18C

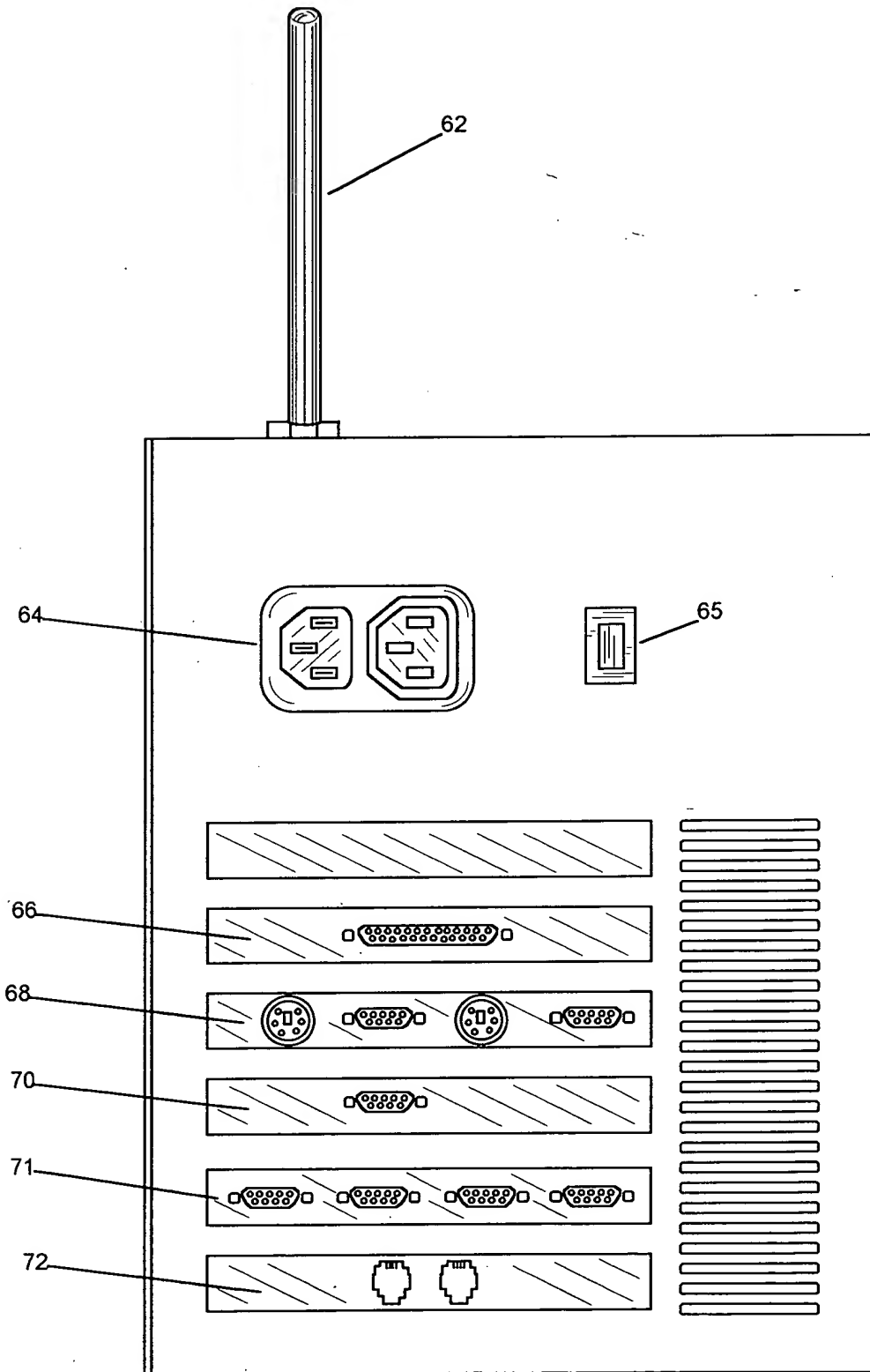


FIGURE 19

3300 2300

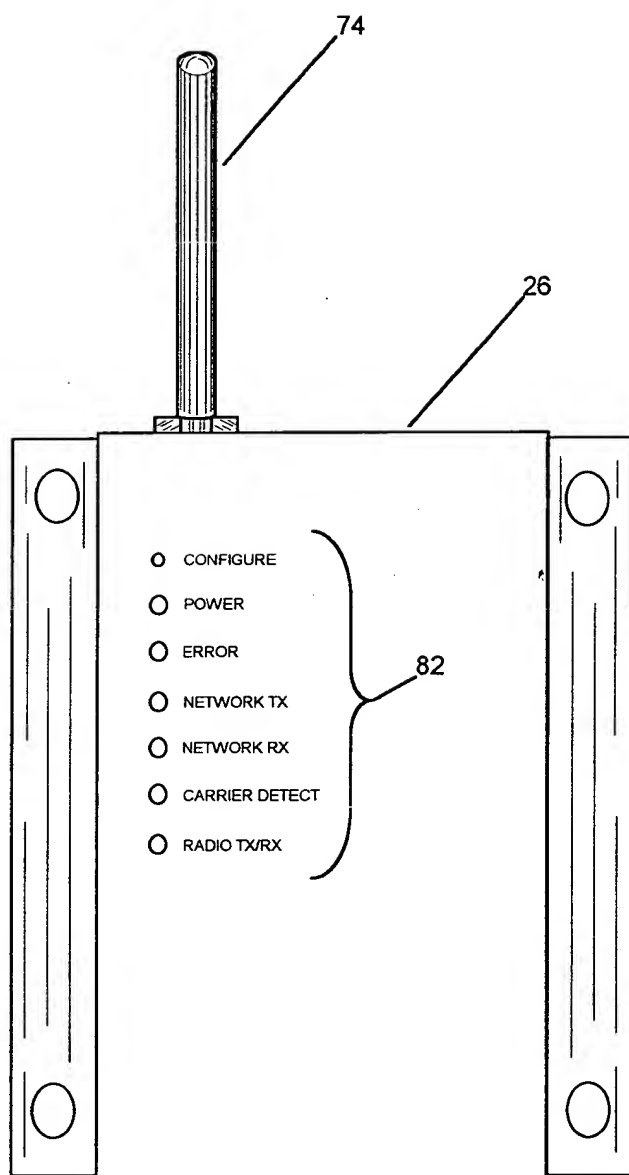


FIGURE 20

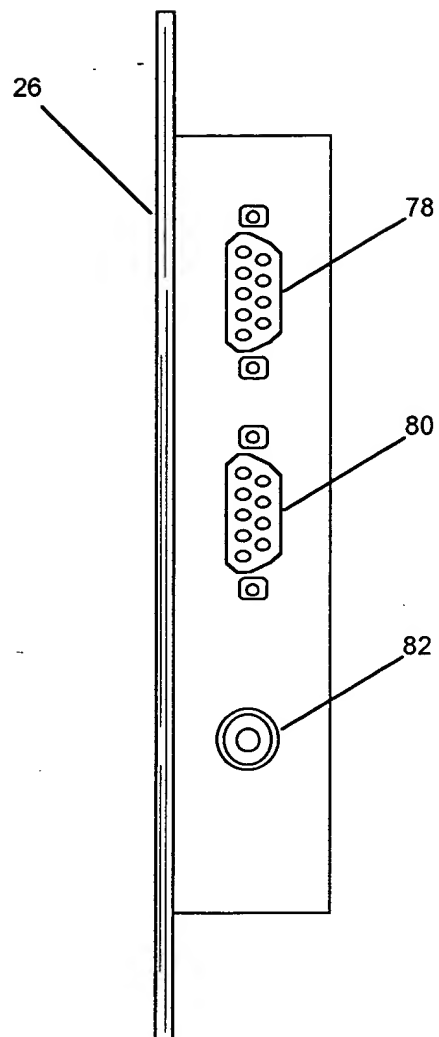


FIGURE 21

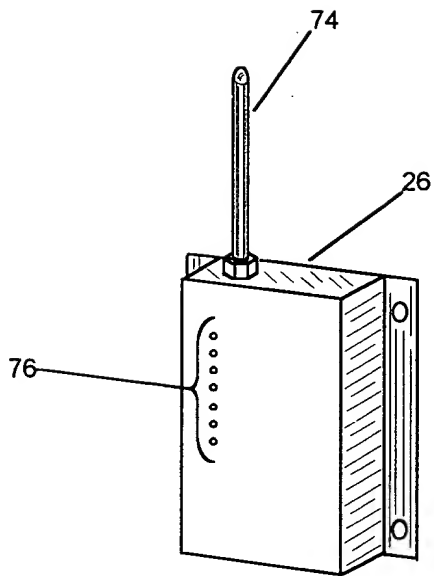


FIGURE 22B

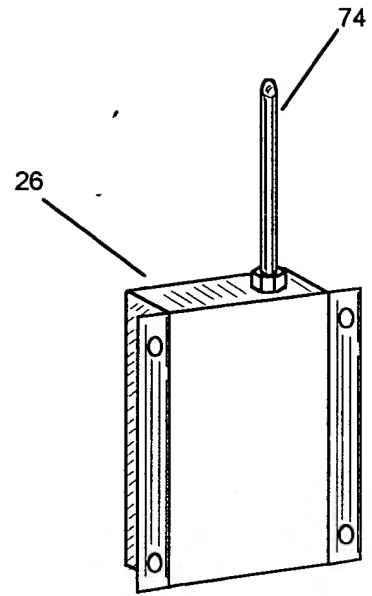


FIGURE 22A

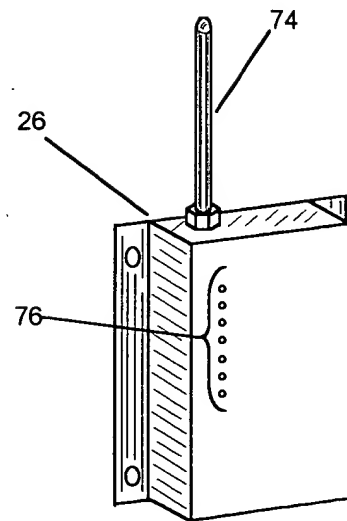
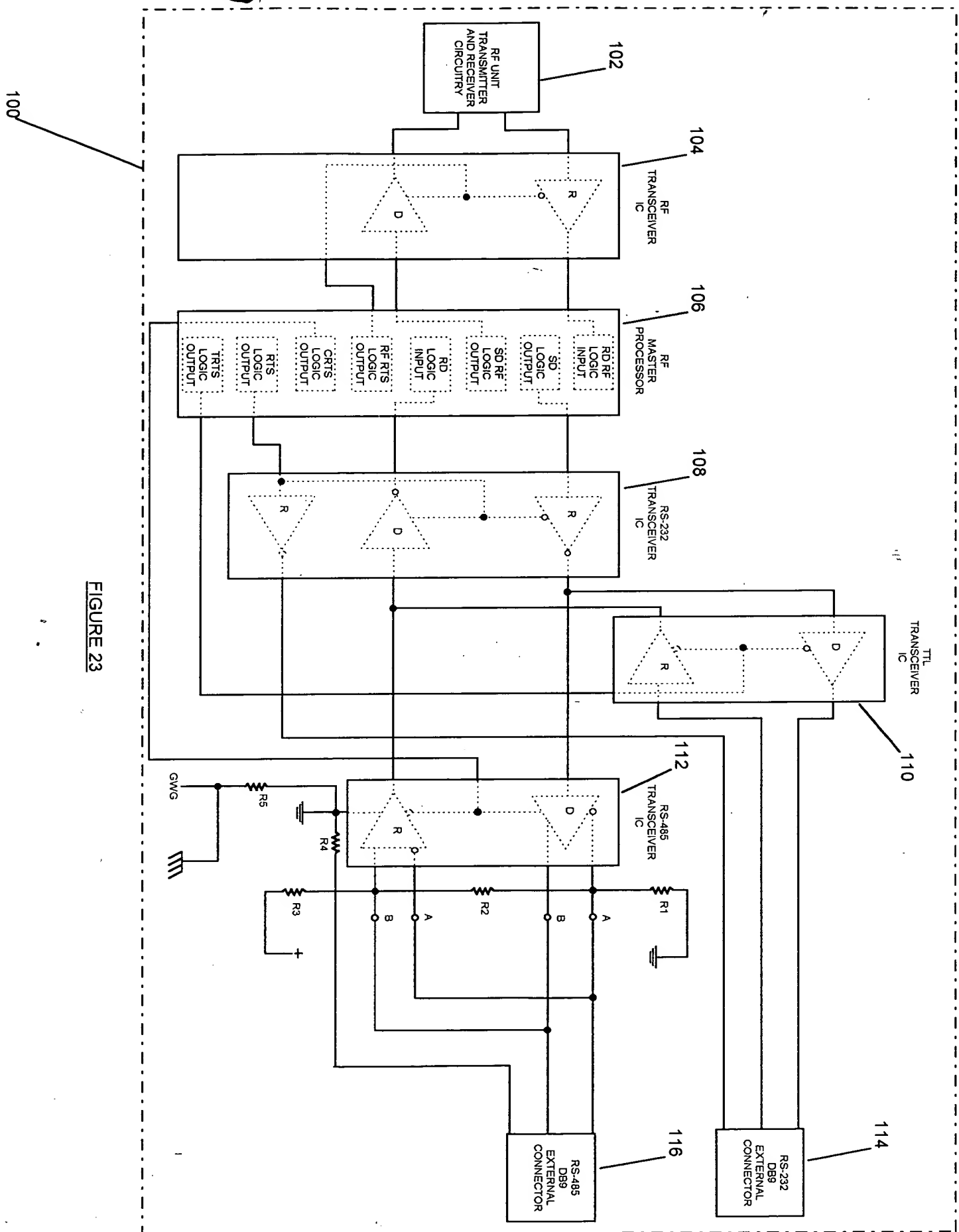


FIGURE 22C





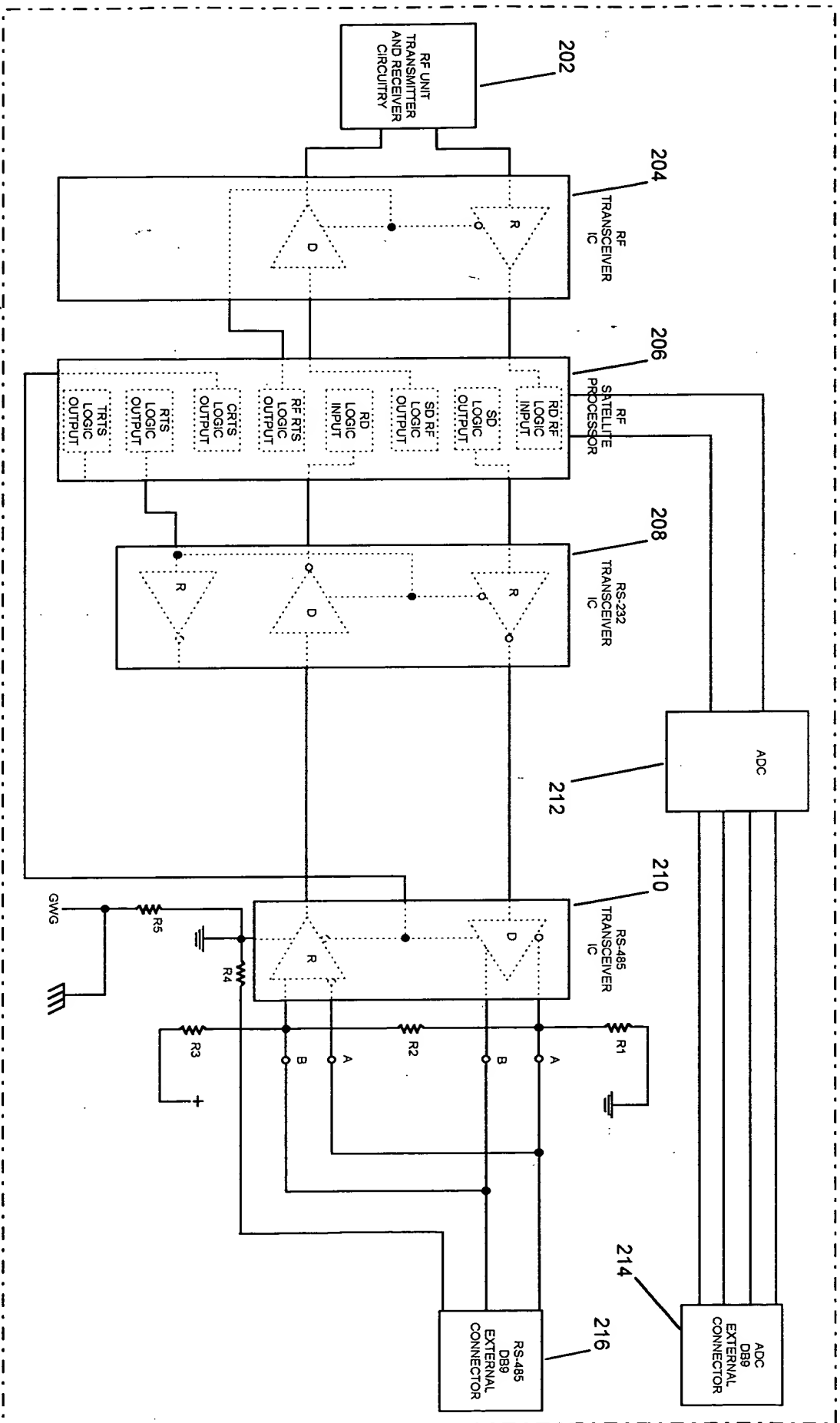


FIGURE 24

09036721.030802

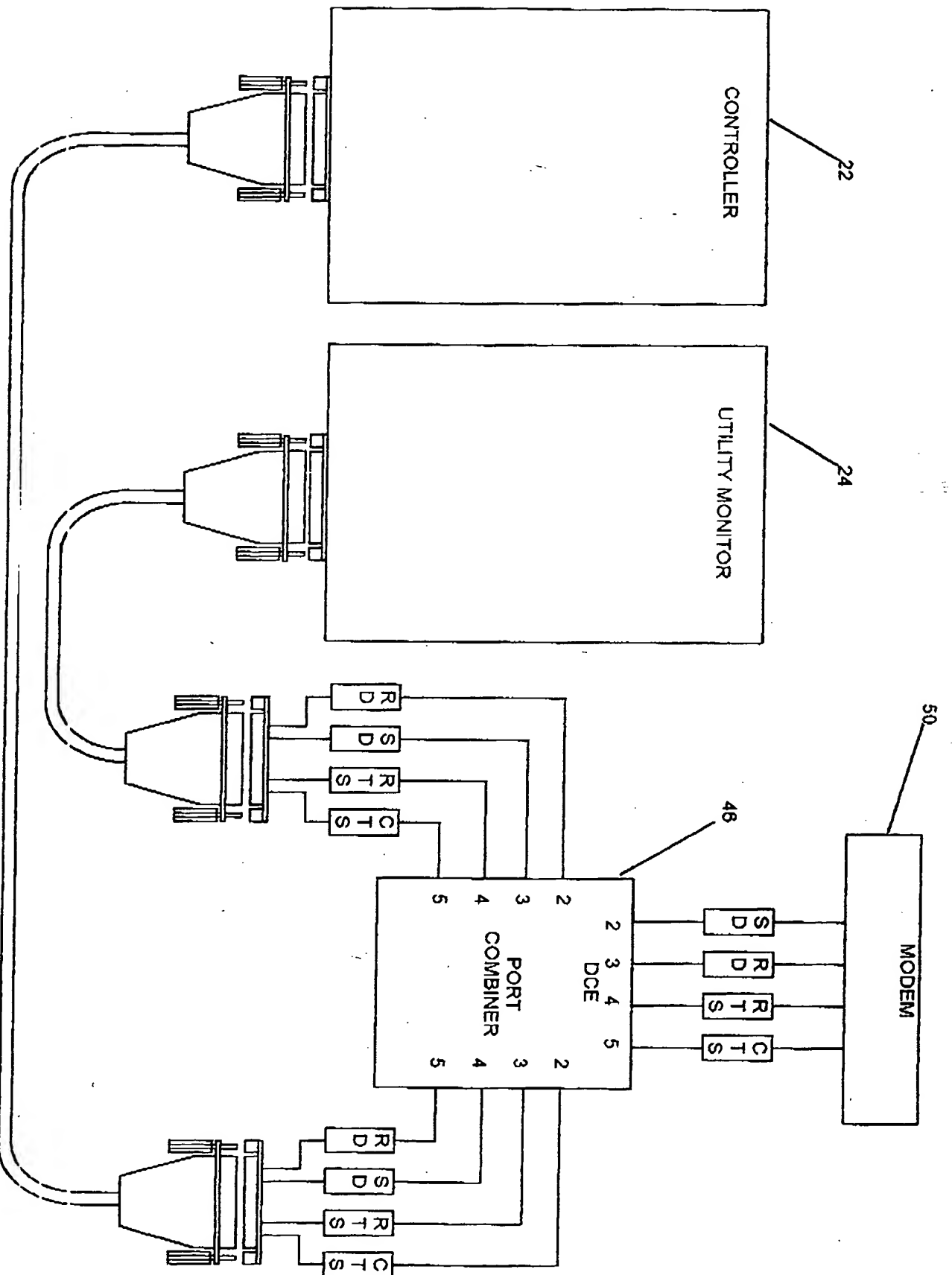


FIGURE 25

00036721.030692